Notice of Allowability	Application No.	Applicant(s)	
	10/788,414	MIRKIN ET AL.	
	Examiner	Art Unit	
	Nelson Yang	1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the response filed May 18, 2010*.

2. ☒ The allowed claim(s) is/are *1,3,4,6-40,42-90,92-99 and 110-129*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 10/14/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *6/29/10* .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Nelson Yang/
Primary Examiner, Art Unit 1641

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with J. Steven Rutt on June 29, 2010.

The application has been amended as follows:

Please rejoin withdrawn claims 3, 4, 6, 8-13, 15, 16, 18, 20, 22, 28-33, 43, 45, 47-51, 53, 54, 56, 58, 60, 66-70, 73-79, 86, 116,

Please amend the claims as follows:

3. A method according to claim 1, wherein the ~~chemical agent~~ selected hydrophilic polyalkylene glycol compounds improves scan speed.

4. A method according to claim 1, wherein the ~~chemical agent~~ selected hydrophilic polyalkylene glycol compounds improves resolution.

8. A method according to claim 1, wherein the ~~chemical agent~~ selected hydrophilic polyalkylene glycol compounds is one or more silane compounds.

9. A method according to claim 1, wherein the ~~chemical agent~~ selected hydrophilic polyalkylene glycol compounds is electrostatically charged.

10. A method according to claim 1, wherein the ~~chemical agent~~ selected hydrophilic polyalkylene glycol compounds is negatively charged.

11. A method according to claim 1, wherein the ~~chemical agent~~ selected hydrophilic polyalkylene glycol compounds forms a self-assembled monolayer on the tip.

12. A method according to claim 1, wherein the ~~chemical agent~~ selected hydrophilic polyalkylene glycol compounds forms a self-assembled monolayer on the tip and is negatively charged.

13. A method according to claim 1, wherein the tip is coated with metal and the ~~chemical agent~~ selected hydrophilic polyalkylene glycol compounds forms a self-assembled monolayer on the metal-coated tip and is negatively charged.

18. The method according to claim 1, wherein the substrate surface is adapted before deposition to covalently bond to the protein patterning compound.

19. The method according to claim 1, wherein the substrate surface is adapted to chemisorb to the protein patterning compound.

20. The method according to claim 1, wherein the substrate surface is adapted to electrostatically bond to the protein patterning compound.

28. The method according to claim 1, wherein the protein patterning compound is a simple protein.

29. The method according to claim 1, wherein the protein patterning compound is a conjugated protein.

30. The method according to claim 1, wherein the protein patterning compound is a globularprotein.

31. The method according to claim 1, wherein the protein patterning compound is a fibrous protein.

32. The method according to claim 1, wherein the protein patterning compound is an enzyme.

33. The method according to claim 1, wherein the protein patterning compound is a viral protein.

34. The method according to claim 1, wherein the protein patterning compound is complexed with other protein, polypeptide, peptide, or nucleic acid.

35. The method according to claim 1, wherein the protein patterning compound is applied to the tip using a solution of protein comprising an additive, wherein the additive improves application to the tip, improves protein deposition, or improvise retention of protein biological activity upon application to the surface

37. The method according to claim 1, wherein the tip is modified to inhibit peptide adsorption, the ~~chemical agent is~~ selected hydrophilic polyalkylene glycol compounds are electrostatically charged, and the nanoscopic tip is a scanning probe microscope tip.

42. A method according to claim 40, wherein the ~~chemical agent~~ selected hydrophilic polyalkylene glycol compounds improves scan speed.

43. A method according to claim 40, wherein the ~~chemical agent~~ selected hydrophilic polyalkylene glycol compounds improves resolution.

47. A method according to claim 40, wherein the ~~chemical agent~~ selected hydrophilic polyalkylene glycol compounds is one or more silane compounds.

49. A method according to claim 40, wherein the ~~chemical agent~~ selected hydrophilic polyalkylene glycol compounds forms a self-assembled monolayer on the tip.

50. A method according to claim 40, wherein the ~~chemical agent~~ selected hydrophilic polyalkylene glycol compounds forms a self-assembled monolayer on the tip and is negatively charged.

51. A method according to claim 40, wherein the tip is coated with metal and the ~~chemical agent~~ selected hydrophilic polyalkylene glycol compounds forms a self-assembled monolayer on the metal-coated tip and is negatively charged.

66. The method according to claim 40, wherein the peptide patterning compound is a simple peptide.

67. The method according to claim 40, wherein the peptide patterning compound is a complex peptide.

68. The method according to claim 40, wherein the peptide patterning compound comprises a protein.

69. The method according to claim 40, wherein the peptide patterning compound comprises an oligopeptide.

70. The method according to claim 40, wherein the peptide patterning compound comprises a polypeptide.

71. The method according to claim 40, wherein the peptide patterning compound is in combination with non-peptide units.

72. The method according to claim 40, wherein the peptide patterning compound comprises a single polypeptide chain.

73. The method according to claim 40, wherein the peptide patterning compound comprises multiple polypeptide chains.

74. The method according to claim 40, wherein the peptide patterning compound includes ten or less peptide bonds.

75. The method according to claim 40, wherein the peptide patterning compound comprises at least 100 peptide.

76. The method according to claim 40, wherein the peptide patterning compound comprises a globular protein.

77. The method according to claim 40, wherein the peptide patterning compound comprises a fibrous protein.

78. The method according to claim 40, wherein the peptide patterning compound comprises an enzyme.

79. The method according to claim 40, wherein the peptide patterning compound comprises an virus.

80. The method according to claim 40, wherein the peptide patterning compound comprises a antibody.

81. The method according to claim 40, wherein the peptide patterning compound is applied to the tip using a solution of protein comprising an additive, wherein the additive improves application to the tip, improves protein deposition, or improvise retention of protein biological activity upon application to the surface

84. The method according to claim 40, wherein the tip is modified to inhibit peptide adsorption, the ~~chemical agent is~~ selected hydrophilic polyalkylene glycol compounds are electrostatically charged, and the nanoscopic tip is a scanning probe microscope tip.

86. The method according to claim 85, wherein the peptide patterning compound comprises an oligopeptide.

120. A method of depositing a plurality of different protein nanoscopic deposits, comprising

direct write nanolithographic writing of the protein with nanoscopic tips treated with one or more hydrophilic compounds ~~which~~ that inhibit protein adsorption, wherein the average distance between the nanoscopic deposits is about 500 nm or less, wherein the writing step is carried out at a rate of at least about 85 dots per four minutes per tip.

123. A method for generating protein arrays comprising depositing from a nanoscopic tip dots of proteins onto a substrate at a rate of at least about 85 dots per four minutes per tip; wherein the tip is modified by one or more hydrophilic compounds ~~which~~ that inhibit protein adsorption to improve deposition of the selected peptide patterning compound to the substrate surface.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson Yang whose telephone number is (571)272-0826. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Shibuya can be reached on (571)272-0806. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nelson Yang/
Primary Examiner, Art Unit 1641